

APR 21 2006

Attorney Docket No.: 1301-1134
Halliburton Docket No.: 990472 U1C1P1 USA

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application: Bryon David Mullen et al.
Application No. 10/763,298
Filed: January 22, 2004
Art Unit: 3672
Confirmation No.: 6536
Examiner: Jennifer Hawkings Gay
For: Gravel Packing Apparatus Having an Integrated Sensor and Method for Use of Same

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pre Appeal Brief Request for Review

Dear Sir:

This Request is being filed in connection with a Notice of Appeal.

Status

Claims 1-56 are currently pending, of which, claims 1, 12, 27, 38 and 47 are in independent form. Claims 7, 17, 26, 28, 37, 42 and 52 contain allowable subject matter. Claims 1-6, 8-16, 18-25, 27, 29-36, 38-41, 43-51 and 53-56 are rejected.

Rejections Under 35 U.S.C. §103(a)

The Examiner has rejected claims 1-6 and 38-41 as being unpatentable over U.S. Patent Number 6,220,345 ("Jones") in view of U.S. Patent Number 5,933,945 ("Thomeer"). The Examiner has rejected claims 8-11 and 43-46 as being unpatentable over Jones in view of Thomeer and further in view of U.S. Patent Number 6,065,535 ("Ross"). The Examiner has rejected claims 12-16, 22-25, 27 and 33-36 as being unpatentable over Jones in view of Thomeer and further in view of U.S. Publication Number 2005/0072564 ("Grigsby"). The Examiner has rejected claims 18-21 and 29-32 as being unpatentable over Jones in view of Thomeer and Grigsby further in view of Ross. The Examiner has rejected claim 47 as being unpatentable over Grigsby in view of Thomeer. The

Examiner has rejected claims 48-51 as being unpatentable over Grigsby in view of Thomeer and further in view of Jones. The Examiner has rejected claims 53-56 as being unpatentable over Grigsby in view of Thomeer and further in view of Ross.

Independent Claims 1 and 38 are Patentable over Jones and Thomeer

Independent claims 1 and 38 have been have been rejected as being obvious over Jones in view of Thomeer, but these references, either alone or in combination, do not teach or suggest all the claim limitations recited in claims 1 or 38 as required to establish a *prima facie* case of obviousness. (See MPEP §2143).

Jones Fails to Teach at Least One Limitation of Claims 1 and 38

Jones fails to disclose at least one limitation found in claims 1 and 38. Neither the applicant nor the Examiner has identified within Jones the explicitly-recited limitation of *a sensor disposed between* the outer tubular and the sand control screen assembly of a gravel packing apparatus found in claims 1 and 38. Accordingly, there is no teaching or suggestion within Jones of at least one limitation explicitly recited in each of claims 1 and 38. (See Response dated 11/9/05, pages 19-21 & 24-25; Office Action dated 8/9/05, page 3; and Office Action dated 12/22/05, page 2).

Thomeer Fails to Teach at Least One Limitation of Claims 1 and 38

Thomeer fails to disclose at least one limitation found in claims 1 and 38. Neither the applicant nor the Examiner has identified within Thomeer the explicitly-recited limitation of *a sensor disposed between* the outer tubular and the sand control screen assembly of a gravel packing apparatus found in claims 1 and 38. Accordingly, there is no teaching or suggestion within Thomeer of at least one limitation explicitly recited in each of claims 1 and 38. (See Response dated 11/9/05, pages 21-25; Office Action dated 8/9/05, page 3; and Office Action dated 12/22/05, page 2).

Neither Jones nor Thomeer Teaches or Suggests a Sensor Disposed Between the Outer Tubular and the Sand Control Screen Assembly of a Gravel Packing Apparatus

Neither Jones nor Thomeer, either alone or in combination, teaches, suggests or discloses *a sensor disposed between* the outer tubular and the sand control screen assembly of a gravel packing apparatus. With respect to Jones, the Examiner states and the applicant agrees that Jones discloses

a gravel packing apparatus that includes “[a]n outer tubular 18 having a plurality of openings therethrough [and a] sand control screen assembly 17, 30 disposed within the outer tubular. The assembly prevents the flow of particulate material of a predetermined size but allows the flow of production fluids.” In addition, the Examiner admits and the applicant agrees that Jones does not include “a sensor operatively coupled to the outer tubular or screen assembly.” (See Office Action dated 8/9/05, page 3 and Office Action dated 12/22/05, page 2).

Thomeer teaches that sensors can be embedded *within* the wall of a composite coiled tubing. (Thomeer, Column 6, line 66 - Column 7, line 1). It is noted that this is the *only* mention of sensors within Thomeer. In addition and as is well known in the field of composite tubing, optical or electrically circuits and conductors are commonly provided within the layers of a composite tubing. (See e.g., Thomeer, Column 2, lines 41-55; Column 10, lines 48-58). For example, as seen in figure 6e of Thomeer, conductive wires 107, 108 are located

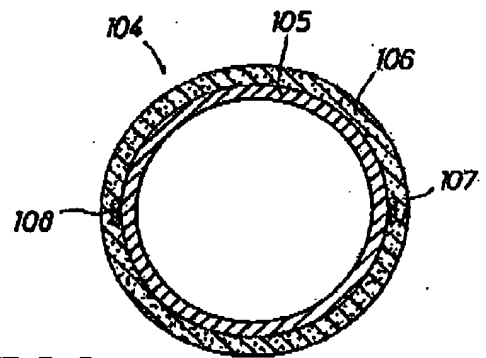


FIG. 6e

within tubing 104 and more specifically *within* the wall of composite layer 106 that surrounds solid liner 105. (See Column 8, lines 32-56). While Thomeer does in fact teach placing sensors or conductive wires *within* the wall of a composite tubing, there is no teaching of *disposing a sensor between* the outer tubular and the sand control screen assembly of a gravel packing apparatus. Accordingly, Jones and Thomeer do not, even in combination, teach or suggest all the claim limitations of claims 1 and 38.

The Examiner has Failed to Establish a *Prima Facie* Case of Obviousness of Claims 1 and 38

At column 4, lines 42-47, Thomeer states that:

In one aspect of the invention, it is possible to provide gravel packing apparatus for a well comprising a perforated composite gravel packing screen. The gravel packing apparatus could include perforations comprising predetermined leak paths which are chemically removable at will, providing the filtering function to the screen.

Based upon this teaching, the Examiner has stated that Thomeer “discloses a composite screen” and “teaches placing sensors within the screen.” (See Office Action dated 8/9/05, page 3

and Office Action dated 12/22/05, page 2). The applicant agrees with the Examiner that Thomeer does in fact teach placing sensors *within* a the wall of a composite tubing and that a composite tubing could be used as a screen. The applicant has argued that Thomeer does not teach a composite tubing including a screen and a separate outer tubular. This fact is not in dispute as the Examiner agrees with this assessment. (Office Action dated 12/22/05, page 10). It follows then that Thomeer does not teach disposing a sensor between an outer tubular element and a screen element of a composite tubing. As to this conclusion, the Examiner states that "Thomeer was used merely to teach a sensor deployed within the layers of a filtering system. Further, the inner layer can be considered the screen with the outer layer the outer tubular member." (Office Action dated 12/22/05, page 10). With regard to the first statement, the applicant again agrees with the Examiner that Thomeer does in fact teach placing sensors *within* a the wall of a composite tubing and that a composite tubing could be used as a screen. With regard to the second statement, there is no teaching within Thomeer that (1) an inner layer of a composite coiled tubing can be a screen and an outer layer of a composite coiled tubing can be an outer tubular member or (2) where a sensor would be located if such a composite coiled tubing were constructed.

As such, the Examiner has failed to provide any factual basis for the contention that the combination of Jones and Thomeer teach or suggest the limitation "*a sensor disposed between* the outer tubular and the sand control screen assembly of a gravel packing apparatus." Accordingly, the Examiner has failed to show that the combination of cited references teaches or suggests all the claim limitations of claims 1 and 38, as required to establish a *prima facie* case of obviousness.

Independent Claims 12 and 27 are Patentable over Jones, Thomeer and Grigsby

Independent claims 12 and 27 have been have been rejected as being obvious over Jones in view of Thomeer and Grigsby, but these references, either alone or in combination, do not teach or suggest all the claim limitations recited in claims 12 or 27 as required to establish a *prima facie* case of obviousness. For the reasons stated above, neither Jones nor Thomeer teach *a sensor disposed between* the outer tubular and the sand control screen assembly of a gravel packing apparatus (claim 12) or *a sensor disposed between* the base pipe and the sand control screen assembly of a gravel packing apparatus (claim 27). Neither the applicant nor the Examiner has identified within Grigsby any teaching to cure this deficiency. (See Response dated 11/9/05, pages 26-27; Office Action dated

8/9/05, page 5; and Office Action dated 12/22/05, page 5). Accordingly, the Examiner has failed to show that the combination of cited references teaches or suggests all the claim limitations of claims 12 and 27, as required to establish a *prima facie* case of obviousness.

Independent Claim 47 is Patentable over Thomeer and Grigsby

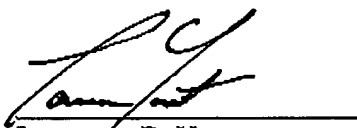
Independent claim 47 has been rejected as being obvious over Grigsby in view of Thomeer, but these references, either alone or in combination, do not teach or suggest all the claim limitations recited in claim 47 as required to establish a *prima facie* case of obviousness. For the reasons stated above, Thomeer does not teach *a sensor disposed between* the perforated tubular and the sand control screen assembly of a gravel packing apparatus. Neither the applicant nor the Examiner has identified within Grigsby any teaching to cure this deficiency. (See Response dated 11/9/05, pages 27-28; Office Action dated 8/9/05, pages 7-8; and Office Action dated 12/22/05, page 7). Accordingly, the Examiner has failed to show that the combination of cited references teaches or suggests all the claim limitations of claim 47, as required to establish a *prima facie* case of obviousness.

Conclusion

In view of the forgoing, the Panel is respectfully requested to allow independent claims 1, 12, 27, 38 and 47 as well as claims 2-11, 13-26, 28-37, 39-46 and 48-56 that are respectively dependent therefrom.

Dated this 21st day of April, 2006.

Respectfully submitted:



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